

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2003-NE-25-AD; Amendment 39-13775; AD 2004-17-03]**

**RIN 2120-AA64**

### **Airworthiness Directives; Pratt & Whitney Canada PW206A and PW206E Turboshift Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD) for Pratt & Whitney Canada (PWC) PW206A and PW206E turboshaft engines. That AD currently requires:

- Initial and repetitive borescope inspections of compressor turbine and power turbine blades for blade axial shift.
- Replacement of blade retaining rivets and certain rotor air seals as terminating action for the repetitive borescope inspections.

This ad requires the same actions as AD 2003-NE-25-AD but the extent of engine disassembly that triggers the required part replacements needs clarification. This AD results from reports of engine shutdowns and emergency landings due to severe vibration, resulting in exhaust gases escaping from the engine-to-exhaust nozzle interface, thereby triggering in-flight engine fire warnings. We are issuing this AD to prevent turbine blade axial shift, which could cause high levels of vibration, loss of engine torque, in-flight engine shutdown, and loss of the airframe exhaust duct.

**DATES:** This AD becomes effective September 24, 2004. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of August 29, 2003. The incorporation by reference of certain other publications, as listed in the regulations, was approved previously by the Director of the Federal Register as of August 29, 2003 (68 FR 48544; August 14, 2003).

**ADDRESSES:** You can get the service information identified in this AD from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1.

You may examine the AD docket at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA).

For information on the availability of this material at NARA, call (202) 741-6030, or go to:  
[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**FOR FURTHER INFORMATION CONTACT:** Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7178; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR Part 39 with a proposed AD. The proposed AD applies to PWC PW206A and PW206E turboshaft engines. We published the proposed AD in the Federal Register on February 20, 2004 (69 FR 7878). That action proposed to require the same actions as AD 2003-16-10, Amendment 39-13263, but would change the description of the extent of engine disassembly that triggers the required part replacements. Those changes are needed to clarify when the parts must be replaced.

### **Examining the AD Docket**

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

### **Request To Limit the Effectivity of This AD**

One commenter states that the referenced Alert Service Bulletin and Service Bulletins only address those engines with between 25 hours Total-Time-Since-New (TTSN) or Total-Time-Since-Repair (TTSR) and 600 hours TTSN or TTSR. Therefore, this AD should address the same group of engines.

We do not agree. The amount of data available is insufficient to limit the effectivity to only those engines with between 25 hours TTSN or TTSR and 600 hours TTSN or TTSR. We have not changed the AD based on this comment.

### **Request for Earlier Versions of Service Bulletins To Apply**

One commenter states that earlier versions of the Service Bulletins should be acceptable for meeting the requirements of this AD.

We agree. There are no substantial changes between the earliest versions of the Service Bulletins and those versions referenced in the proposed AD. We have added those service bulletin references to paragraph (k) of the AD, which is the Previous Credit paragraph.

### **Conclusion**

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Costs of Compliance**

There are about 130 PWC PW206A and PW206E turboshaft engines of the affected design in the worldwide fleet. We estimate that 15 engines installed on airplanes of U.S. registry are affected by this AD. We also estimate that it will take about 0.5 work hours per engine to perform the required actions, and that the average labor rate is \$65 per work hour. Required parts will cost about \$9,077 per engine. Based on these figures, we estimate the total cost of this AD to U.S. operators to be \$136,656. The manufacturer has stated that it may provide replacement parts at no cost to operators.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-NE-25-AD" in your request.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The Federal Aviation Administration (FAA) amends § 39.13 by removing Amendment 39-13263 (68 FR 48544, August 14, 2003) and by adding a new airworthiness directive (AD), Amendment 39-13775, to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2004-17-03 Pratt & Whitney Canada:** Amendment 39-13775. Docket No. 2003-NE-25-AD.  
Supersedes AD 2003-16-10, Amendment 39-13263.

## Effective Date

- (a) This AD becomes effective September 24, 2004.

## Affected ADs

- (b) This AD supersedes AD 2003-16-10, Amendment 39-13263.

## Applicability

- (c) This AD applies to Pratt & Whitney Canada (PWC) PW206A and PW206E turboshaft engines. These engines are installed on, but not limited to, MD Helicopters, Inc. Model MD-900 helicopters.

## Unsafe Condition

- (d) This AD is prompted by reports of engine shutdowns and emergency landings due to severe vibration, resulting in exhaust gases escaping from the engine-to-exhaust nozzle interface, thereby triggering in-flight engine fire warnings. The actions specified in this AD are intended to prevent turbine blade axial shift, which could cause high levels of vibration, loss of engine torque, in-flight engine shutdown, and loss of the airframe exhaust duct.

## Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

## Initial Sequence of Borescope Inspections

- (f) Perform an initial sequence of borescope inspections of compressor turbine blades and power turbine blades for blade axial shift within the turbine disks. Use paragraph 3. of Accomplishment Instructions of PWC Alert Service Bulletin (ASB) No. PW200-72-A28242, Revision 1, dated October 2, 2002, for the borescope inspection and determination of blade shift. Do the inspections at the following times:

- (1) Within 25 flight hours accumulated, or 30 days after the effective date of this AD, whichever occurs earlier.

(2) After 30 flight hours, but before 50 flight hours accumulated since inspection of paragraph (f)(1) of this AD.

(3) After 80 flight hours, but before 100 flight hours accumulated since inspection of paragraph (f)(1) of this AD.

(4) After 180 flight hours, but before 200 flight hours accumulated since inspection of paragraph (f)(1) of this AD.

### **Repetitive Borescope Inspections**

(g) Thereafter, perform repetitive borescope inspections at intervals of not less than 280 nor more than 300 flight hours since-last-inspection. Use paragraph 3. of Accomplishment Instructions of PWC ASB No. PW200-72-A28242, Revision 1, dated October 2, 2002, for the borescope inspections and determination of blade shift.

### **Disposition**

(h) If you find any blade shift, remove engine from service before further flight and perform rivet and rotor air seal replacements, as specified in paragraphs (i)(1) through (i)(3) of this AD, to return the engine to service.

### **Terminating Action**

(i) At the next engine shop visit when access is available to subassemblies, such as modules, accessories, and components, or at the next engine overhaul, whichever occurs first, but before accumulating 1,800 flight hours from the effective date of this AD or before December 31, 2009, whichever occurs first, do the following:

(1) Replace the compressor turbine blade retaining rivets with new P/N retaining rivets, and the No. 4 bearing rear rotor air seal with the new P/N No. 4 bearing rear rotor air seal. Use paragraph 3., Part A, of Accomplishment Instructions of SB No. PW200-72-28069, Revision 5, dated February 10, 2003.

(2) Replace the No. 3 bearing rotating air seal with the new P/N air seal, and the No. 4 bearing front rotor air seal with the new P/N No. 4 bearing front rotor air seal. Use paragraph 3., Part B, of Accomplishment Instructions of SB No. PW200-72-28069, Revision 5, dated February 10, 2003.

(3) Replace the power turbine blade retaining rivets with new P/N power turbine blade retaining rivets. Use paragraph 3. of Accomplishment Instructions of SB No. PW200-72-28239, Revision 2, dated February 10, 2003.

(j) Completing the actions in paragraphs (i)(1) through (i)(3) of this AD terminates all inspection requirements of this AD.

### **Previous Credit**

(k) Previous credit is allowed:

(1) For performing the initial sequence for borescope inspections in paragraph (f) of this AD, that were done using AD 2003-16-10.

(2) For terminating action in paragraphs (i)(1) through (i)(3) of this AD that was done using the Accomplishment Instructions of one of the following, before the effective date of this AD:

(i) SB No. PW200-72-28069, dated June 10, 1997

(ii) SB No. PW200-72-28069, Revision 1, dated September 8, 1997

(iii) SB No. PW200-72-28069, Revision 2, dated December 18, 1997

(iv) SB No. PW200-72-28069, Revision 3, dated November 30, 1998

- (v) SB No. PW200-72-28069, Revision 4, dated December 27, 2000
- (vi) SB No. PW200-72-28069, Revision 5, dated February 10, 2003
- (vii) SB No. PW200-72-28239, dated September 5, 2002
- (viii) SB No. PW200-72-28239, Revision 1, dated December 5, 2002
- (ix) SB No. PW200-72-28239, Revision 2, dated February 10, 2003

## Alternative Methods of Compliance

(l) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

## Material Incorporated by Reference

(m) You must use the Pratt & Whitney Canada Service Bulletins and Alert Service Bulletin listed in Table 1 of this AD to perform the inspections and replacement actions required by this AD. The incorporation by reference of this publication was approved previously by the Director of the Federal Register as of August 29, 2003 (68 FR 48544; August 14, 2003), in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Pratt & Whitney Canada, 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G1A1. You can review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html). Table 1 follows:

**TABLE 1.—INCORPORATION BY REFERENCE**

Service bulletin	Page number(s)	Revision	Date
PW200-72-A28242, Total Pages—7	All	1	October 2, 2002.
PW200-72-28069, Total Pages—17	All	5	February 10, 2003.
PW200-72-28239, Total Pages—20	All	2	February 10, 2003.

## Related Information

(n) Transport Canada issued airworthiness directive CF-2003-06, dated February 4, 2003, which pertains to the subject of this AD, in order to assure the airworthiness of these PWC PW206A and PW206E turboshaft engines in Canada.

Issued in Burlington, Massachusetts, on August 12, 2004.

Ann Mollica,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 04-18998 Filed 8-19-04; 8:45 am]

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